

## Application of Appraisals

There are six types of appraisals. They are designed to meet a variety of process improvement needs for an organization. The full internal method is the standard method of which the other types are variants.

The appraisal types, their purposes, and typical duration, are summarized in Table 1-2. Note that some FAM variations are intended to assist lower maturity or capability level programs to meet improvement goals.

For all appraisal types, the Plan and Prepare for the Appraisal phase ranges from about 15 to 45 days.

**Table 1-2. Appraisal Types and Usage Characteristics**

<b>Appraisal Type</b>	<b>Purpose</b>	<b>Typical Duration</b>
Full internal	Establish or reestablish a formal baseline of actual practice in the organization. Formal comparison of practices to the model.	7-17 days over 2-6 weeks
Facilitated Discussion	Formulate process descriptions and implementation plans for a process area.	4-16 weeks over 7-26 weeks
Document-Intensive	Check the completeness and quality of supporting documentation and artifacts.	3-10 days over 2-5 weeks
Questionnaire-based	Quick check on process improvement progress based on whether improvements are perceived to have been implemented by personnel.	2-8 days over 3-6 weeks
Interview-based	Uncover major process improvement issues or barriers to change.	5-17 days over 1-6 weeks
Full external	Formal external appraisal of organization, based on the model.	7-17 days over 2-6 weeks

### Organizational baseline via Full Internal Appraisals

At the organization-wide level of interest, a full internal appraisal will generally be used to diagnose the current situation, establish an organizational baseline of actual practice in the organization, and identify the priority needs of the organization for process improvement. This step may come first, if executive or organizational awareness is needed about process improvement, or it may come after some process establishment and

improvement has occurred to check on progress and distribution of the improved processes. The internal appraisal is to focus the organization on widest possible scope of improvement to gain the benefits of economy of scale. The full internal appraisal is described in Chapter 2 of the FAM.

### **Process Description via Facilitated Discussion**

When an organization needs to create some process descriptions, a Facilitated Discussion appraisal method is very appropriate. This method identifies the practices and goals currently satisfied in an individual process area (the "as-is" process description), provides a "to-be" (compliant) process description, and an implementation plan that the organization element(s) responsible for the process can use to deploy the compliant process. This method is described in Section 3.1 of the FAM.

### **Tracking improvement via Questionnaire-based Appraisals**

Once improvement efforts have been underway, a questionnaire-based appraisal provides periodic tracking of the improvement's implementation. These should not be performed any more frequently than quarterly for any particular process area efforts. Accuracy may be somewhat low early in the improvement efforts, but sampling can provide a sufficiently accurate "snapshot" to indicate to management whether intervention is needed or not. Sometimes this is used to remind practitioners in the improvement effort that management is interested in their work and results. This type of appraisal is described in FAM Section 3.3, and is based on the Interim Profile method (IP).

### **Focusing improvement efforts via Interview-based Appraisals**

An interview-based appraisal can be conducted to uncover the most important issues to resolve. These are shorter and somewhat less comprehensive than full appraisals but use fewer resources, and still build consensus for adjustments in improvement focus. This type of appraisal is described in FAM Section 3.4, and it is partly based on SE-CMM Appraisal Method (SAM).

### **Preparing for a full appraisal via Document-intensive Appraisals**

Full appraisals require documentation, artifacts, and other evidence or proof of performance of practices or goal satisfaction. The document-intensive appraisal type organizes and verifies completeness of the set of documentation typically in preparation for a full appraisal or just to formalize the process asset repository or library. It may be a periodic process group exercise or training exercise to orient new process improvement staff. This appraisal type is described in FAM Section 3.2.

### **Organizational Evaluation via Full External Appraisals**

Full external appraisals determine the process capability of the organization. They are similar to full internal appraisals, but are performed by others typically to evaluate the

organization's capability. This appraisal type is described in FAM section 3.5. It is based on the CMM-Based Appraisal for Software Capability Evaluation (SCE) method.

## **Case Studies**

In order to elaborate the usage of the FAM and its variations, the following two hypothetical scenarios are provided. Naturally, other scenarios are possible depending on the needs and culture of the organization.

### **Case 1**

An organization, AXX, has considered and is committed to a process improvement program. AXX believes that it is in fairly good shape with respect to the appropriate process areas of the FAA-iCMM that it is involved with. They believe that they have experience in the practices of the FAA-iCMM and that their documentation is adequate. Because of this, and the fact that the director wants to know where they stand with respect to the FAA-iCMM, they have decided that a full FAM is required. The FAM results are fairly good, justifying their approach, and they next want to create a formal process improvement program. Based on the FAM results, they have selected several process areas to focus on. In order to build process descriptions and implementation plans for these process areas, AXX has decided to employ the facilitated discussion (FD) method.

After a period of about nine months, AXX wishes to take a quick check on results. They do not believe that a full FAM is necessary at the time so they opt for a questionnaire-based appraisal (QBA). If the QBA results are good they will add additional process areas to their improvement program, again using the FD method to develop implementation plans. One of the things that the QBA picks up is that while practices are good, documentation has not appreciably improved. In order to evaluate and baseline their documentation progress, AXX decides to employ a document intensive (DI) appraisal. The DI results are integrated into their improvement program efforts and they plan on conducting another FAM to re-baseline their process against the FAA-iCMM in the 18-24 month period since the improvement program began.

Note that the timeline for this case is about two years. The organization may wish to spread this out depending on resources, implementation schedule, and organizational goals. Notice that three FAM variations were employed, along with the full FAM.

### **Case 2**

In this case, the organization, AYY, is not sure about proceeding with a full process improvement program but recognizes that it has engineering, acquisition, and management issues. They believe it is more important to focus on major

issues before taking the plunge into a formal program. Because of this, they decide that the interview-base (IB) method is the appropriate one for them at this point. AYY decides to tackle two issues, directly related to process areas in the FAA-iCMM. They employ the FD method to develop their process improvement plans. In about nine months AYY decides it is time to check the progress of this program. To get a quick check, they decide to employ the QBA method.

The results are good, and AYY is now comfortable with process improvement. They decide to pursue their process improvement efforts with increased intensity and request that a FAM be conducted to baseline their practices against the FAA-iCMM.

Note that the timeline for this scenario is about one year. Notice that two FAM variations were employed, along with the FAM.